

## DESCRIPTION OF PSEUDOMELANOPA LIUPAN SP. NOV. FROM NINGXIA, CHINA (OPILIONES, EUPNOI, SCLEROSOMATIDAE)

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**Abstract** A new species of Eupnoi, *Pseudomelanopa liupan* sp. nov., belonging to the family Sclerosomatidae is described and illustrated based on specimens collected from Ningxia Hui Autonomous Region, China. This new species differs from the only known species, *P. taiwana* Suzuki, 1974, of the genus in the shapes of the penis and the seminal receptacles.

**Key words** Opiliones, Eupnoi, Sclerosomatidae, *Pseudomelanopa*, new species, China.

### 1 Introduction

The known Opilionids of the genus *Pseudomelanopa* Suzuki, 1974 are moderate sized, of nearly oval outline, and have been collected from the humid fallen leaves and under stones nearby a stream flowing in the mountains. Suzuki (1974) established the genus based on *P. taiwana* from Taiwan, China. Based on the examinations of the arachnological collection of the Museum of Hebei University, Baoding, China (MHBUS), a new species is identified and described as *P. liupan* sp. nov. All measurements given are in millimeters.

### 2 Description

*Pseudomelanopa liupan* sp. nov. (Figs. 1–23)

Male (Figs. 1, 3). Coloration. Ground color of carapace with many darker marks on each side. Two short brown lines extending from the front margin of carapace towards the eye tubercle. Eye tubercle rusty yellow, with blackish eye rings. A central figure distinctive, outlined in black with a brown center, extending anteriorly to ridge behind eye tubercle and posteriorly to segment IV, being constricted at the first scutal segment and broadest at hind margin of area II. Each segment of central figure with a few yellowish dots. Lateral of central figure whitish yellow to brown. Median spine brown. Venter and coxae concolorous with dorsum. Each sternite with a transverse row of whitish yellow dots. Chelicerae rusty yellow, segment II laterally marmorated with brown, the claws black and tipped. Palp yellowish brown but tarsus yellow. Legs same color as palp.

Male. Surface of dorsum uniformly granular, median frontal area of carapace with three or four small low tubercles (Fig. 2). Scutal area II with a short and erect median spine (Fig. 3). Eye tubercle dorsally rounded, canalculated, entirely smooth. Free sternites,

genital plate smooth, with only hair.

Surfaces of coxae I densely, coxae II–IV sparsely granular. All coxae anteriorly and coxae I, II and IV posteriorly with a row of small tubercles (Figs. 13–14). Genital plate with scattered hairs and a lateral row of similar tubercles (Fig. 7).

Chelicera. (Figs. 9–10) Segment I dorsally unarmed, segment II only hairy. Suprachelical lamellae medially protruding (Fig. 2).

Palpus. (Figs. 4–6) Ventral surface of femur armed with scattered sharp pointed spines, patella and tibia unarmed except for a short, sharp-tipped spine in the distal margin of patella, basal portion of tarsus with a short ventral row of denticles.

Legs. (Fig. 8) Trochanters spined laterally, all femora, patellae and tibiae armed with several rows of fine spines along entire segment; femora and patellae with two and three pointed spines at distal dorsal margin; metatarsi and tarsi unarmed, only hairy.

Penis. (Figs. 11–12) Shaft long, basal portion considerably widened. Alate part well developed, forming two pockets. Ventral side of basal opening with a distinct distal furrow.

Female. Similar to male but larger (Fig. 23). Palpal patella and tibia dorsally with scattered spines, tarsus without a definite row of teeth (Figs. 20–21). Leg spines shorter and smaller (Fig. 22).

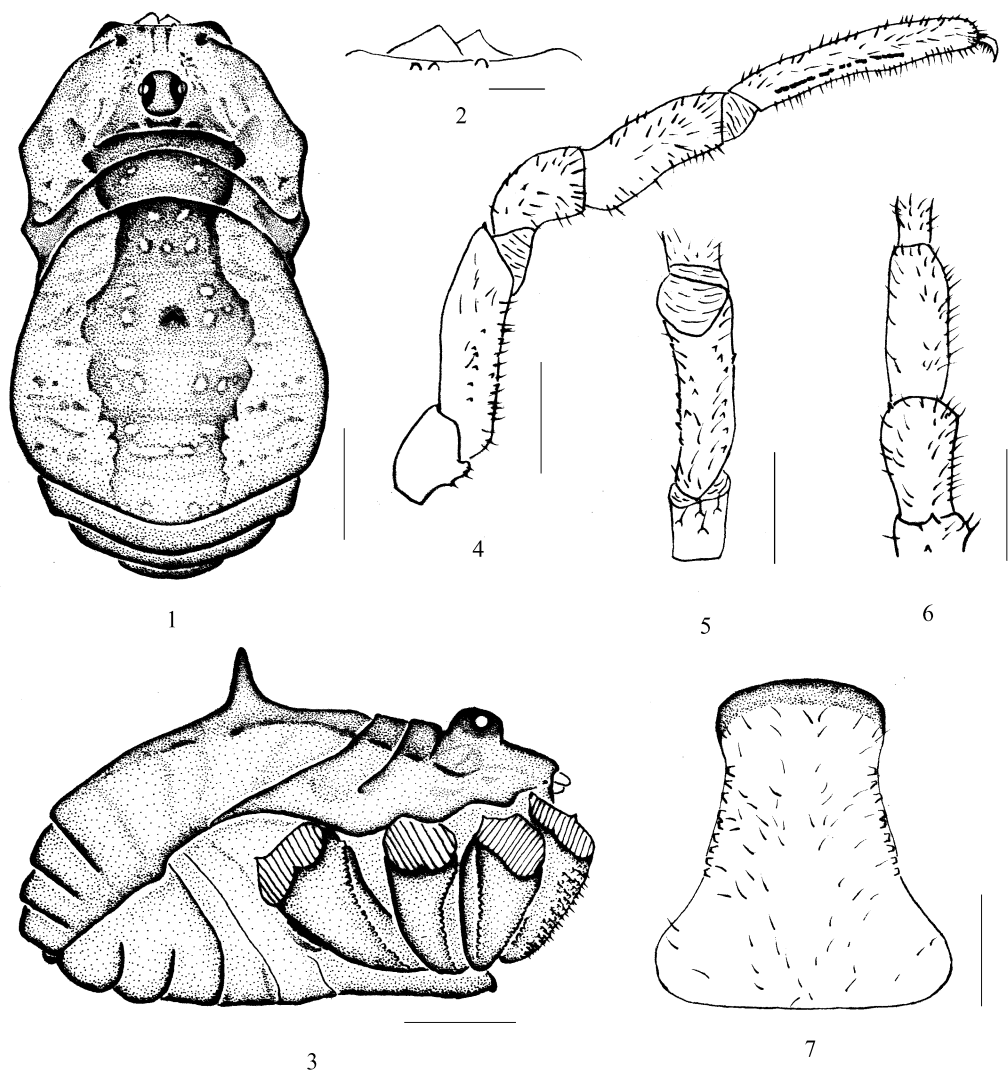
Ovipositor. (Fig. 18) 3 pairs of forceps segments and 23 normal segments, of which first 9 segments armed with a complete whirl of eight spines, seminal receptacles at the second segment, two ampullae (Fig. 19).

Measurements. Male holotype (female paratype in parentheses). Body 4.89 (6.24) long, 2.90 (3.49) wide at the widest portion. Penis shaft 2.90 long, 0.43 wide at base; glans 0.23 long. Eye tubercle 0.40 (0.40) long, 0.38 (0.38) wide, 0.23 (0.23) high. Measurements of palpi and legs (Table 1).

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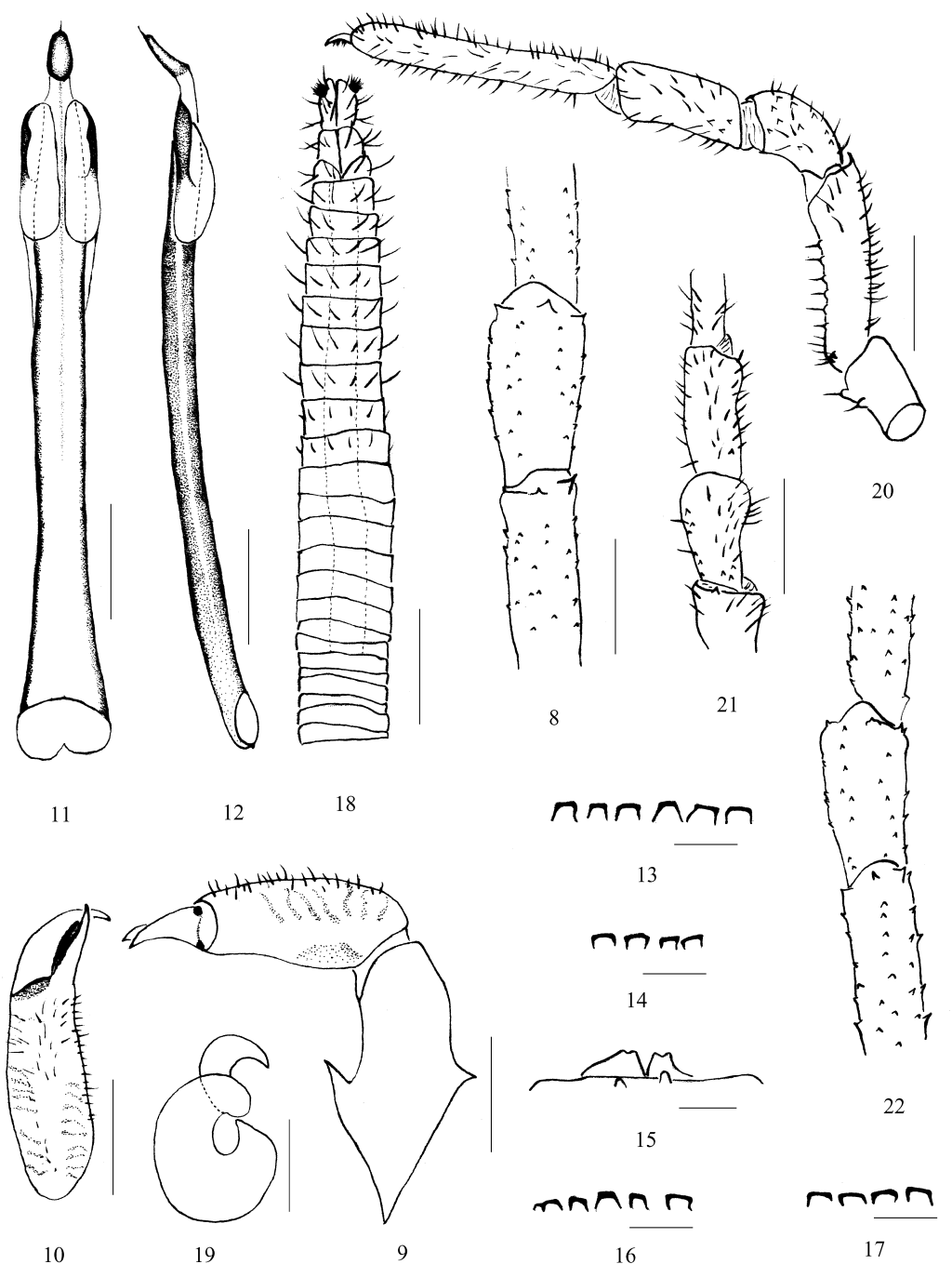
Figs 1-7. *P. liupan* sp. nov., male holotype (1-7). 1. Body, dorsal view. 2. Supracheliceral lamellae, dorsal view. 3. Body, lateral view. 4. Left palpus, medial view. 5. Trochanter and femur of left palpus, ventral view. 6. Patella and tibia of left palpus, dorsal view. 7. Genital operculum, ventral view. Scale bars: 1, 3= 1 mm; 2= 0.25 mm; 4-7= 0.5 mm.

Table 1. Measurements of palpus and legs of male holotype and female paratype.

	Trochanter	Femur	Patella	Tibia	Metatarsus	Tarsus	Total
Palpus	0.37 (0.30)	0.88 (0.95)	0.58 (0.48)	0.78 (0.68)		1.15 (1.25)	3.63 (3.45)
Leg I	0.40 (0.38)	2.04 (2.50)	0.70 (0.73)	1.68 (1.87)	1.92 (2.08)	2.72 (3.22)	9.34 (10.41)
Leg II	0.47 (0.40)	4.52 (6.59)	1.00 (1.03)	3.72 (4.33)	3.88 (3.50)	8.89 (8.45)	21.71 (23.07)
Leg III	0.43 (0.38)	2.08 (2.60)	0.72 (0.73)	1.70 (2.18)	1.96 (2.18)	3.12 (3.02)	9.67 (10.71)
Leg IV	0.40 (0.40)	3.52 (4.47)	0.96 (1.14)	3.29 (3.12)	3.20 (3.85)	3.87 (4.68)	14.76 (17.16)

Variation. Size range of male (female in parentheses). Body length 4.89-5.62 (6.24-6.87); width 2.90-3.10 (3.49-3.73).  
Diagnosis. This new species resembles *P. taiwana* Suzuki, 1974 (Suzuki, 1974: figs. 14-22; Suzuki, 1977: figs. 7F-P), but differs from the latter by: 1) the shapes of penis and the seminal receptacles (Figs. 1F-12, 19); 2) the leg spines shorter and smaller than that of the latter; 3) female eye tubercle rounded from the above and entirely smooth, while the female of latter with a pair

of small blunt process lying above the eyes; 4) patella and tibia of male palpus unarmed dorsally except for a short, sharp tipped spine in the distal margin of patella, while armed dorsally with denticles in the latter.  
Holotype ♂ (Opi. -MHU-NX0801), China, Ningxia Hui Autonomous Region, Jingyuan County, Liupanshan Natural Reserve, Erlonghe Forest Farm, Mt. Liupan (35°23'N, 106°16'E, about alt. 2 200 m; ), 23 June 2008, leg. by ZHANG Chao and DI Zhi-Yong (MHBU). Paratypes, 3 ♂♂ (Opi. -MHU-NX0802-



Figs 8-22. *P. liupan* sp. nov., male holotype (8-14), female paratype (15-22). 8. Femur, patella and tibia of right third leg, dorsal view. 9. Left chelicerae, ectal view. 10. Same, frontal view. 11. Penis, ventral view. 12. Same, lateral view. 13. Anterior margin of coxa I. 14. Same of coxa III. 15. Suprachelical lamellae, dorsal view. 16. Anterior margin of coxa I. 17. Same of coxa III. 18. Ovipositor, ventral view. 19. Left seminal receptacle. 20. Left palpus, lateral view. 21. Patella and tibia of left palpus, dorsal view. 22. Femur, patella and tibia of right third leg, dorsal view. Scale bars: 8, 12, 18, 20-22= 0.5 mm; 13, 14, 16, 17= 0.1 mm; 15= 0.25 mm; 19= 0.25 mm.

0804), 5 ♀♀ (Opi. -MHU-ONX0805-0809), same data as holotype; 3 ♀♀, China, Ningxia Hui Autonomous Region, Jingyuan County, Liupanshan Natural Reserve, Longtan Forest Farm, Mt. Liupan (35°23' N, 106°20' E; about alt. 2 000 m), 21 June 2008, leg. by ZHANG Chao and DI Zhi-Yong (MHBU).

**Etymology.** The specific name derived from the type locality.

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Fig 23. *P. liupan* sp. nov., female paratype.

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## 宁夏六盘伪黑盲蛛记述 (盲蛛目, 开气门亚目, 硬体盲蛛科)

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**摘 要** 记述了分布于中国宁夏回族自治区的伪黑盲蛛属 *Pseudomelanopa* 1 新种: 六盘伪黑盲蛛 *P. liupan* sp. nov., 此种与本属中的唯一种类台湾伪黑盲蛛 *P. taiwana* 相比较, 雄蛛的阳茎和雌蛛的纳精囊明显不同; 新种步足上的刺明显小于台湾伪黑盲蛛 *P. taiwana*; 新种雌蛛眼丘光滑, 而台湾伪黑

盲蛛 *P. taiwana* 眼丘上具 1 对小钝突; 新种雄蛛触肢膝节和胫节光滑, 仅在其膝节远端具 1 尖刺, 而台湾伪黑盲蛛 *P. taiwana* 雄蛛触肢膝节和胫节背面具小齿。新种模式标本保存于河北大学博物馆。

**关键词** 盲蛛目, 开气门亚目, 硬体盲蛛科, 伪黑盲蛛属, 新种, 中国.

中图分类号 Q959.226

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